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ABSTRACT

Early findings are reported from the Michigan State University Vulnerability Study, a study of differences in parents and children of families with an alcoholic father and matched, community control families with a non-alcoholic father. Male preschool children in the alcoholic homes were the target group, because they are 6 to 10 times more at risk for adult alcoholism than are the control children. As hypothesized, both parents in the high risk families reported more history of antisocial behavior than did control parents. Differences in family climate revealed that the alcoholic families were less likely to pursue moral and religious activities than the other families. Both parents in the alcoholic families described their transactions in more hostile terms than did controls. Both husbands and wives in alcoholic families agreed that their relationship centered on hostility rather than around control. More generally, the data indicate that a group of 4-year-old children who are disproportionately at risk for alcoholism in adulthood are already exposed early in life to parents who are more antisocial in childhood and adulthood, are more hostile toward each other, and who have created a family environment that is more likely to foster the continuation of such behavior than to moderate it. (Author/RH)

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Differences in Interpersonal and Individual Psychopathology in Young Families at High Risk for the Development of Alcoholism[1,2]

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Abstract

Differences in Interpersonal and Individual Psychopathology in Young Families at High Risk for the Development of Alcoholism

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Early findings are reported from the Michigan State University Vulnerability Study. The study deals with parent and child differences between families with an alcoholic (but currently untreated) father and matched community control families. Male preschool children in the alcoholic homes are the target group; they are six to ten times as likely to become alcoholic as are the control children. Both parents and children are extensively evaluated in this prospective twenty year study. As hypothesized, both parents in the high risk families report more history of antisocial behavior. Family climate differences based on the Moos Family Environment Scale show the alcoholic families as less likely to pursue moral-religious activities. Alcoholic fathers also see the family as allowing them greater independence (and presumably greater license to come and go) than is true of their spouses or of control parents. Interactional involvement for the couple was assessed by way of the Structural Analysis of

Social Behavior measures. Both husbands and wives in the alcoholic families describe their transactions in more hostile terms than do controls. Both are in agreement that relationship issues center around hostility rather than around control. More generally, the data indicate that a group of four year old children who are disproportionately likely to become alcoholics some 20 to 30 years later are already exposed to parental models who are more antisocial as children and as adults, who are more hostile with each other, and have created a family environment that is more likely to foster the continuation of such behavior rather than moderate it.

Differences in Interpersonal and Individual Psychopathology in Young Families at High Risk for the Development of Alcoholism

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The present report is one of a series detailing early findings from Wave One data of the Michigan State University Vulnerability Study (Zucker, Noll, Draznin, Baxter, Weil, Theado, Greenberg, Charlot & Reider, 1984.) The project is a prospective, 20 year investigation of initially intact, community recruited families with an already alcoholic (but usually not yet in treatment) father and a male child who at T_1 data collection is between 2½ and 6 years of age. These largely preschool children are at considerably heightened risk to become alcoholic themselves in later life. The contrast group for the work is a community control group of families with a nonalcoholic father and like-aged sons; these families are recruited as yoked, matched-pairs from the same census tracts as the alcoholic families. Using a formal predictive model, the study involves eighteen hours of assessment via laboratory interaction tasks, questionnaires, observer ratings, and interview data.

The research focus is the seperate and interactive contribution of five types of factors: genetically mediated individual differences, personality differences, social learning, family influences and peer influences. Of particular interest is the manner in which these factors interact with each other over developmental time in contributing to an eventual pattern of alcohol abuse and other behavior disorders.

In addition, the predictive model we are using distinguishes between two subtypes of contributory influence for each of the above areas. The first subtype, called drinking specific influences underscores the by now well known observations that alcohol related variables are themselves some of the most powerful predictors of current and future drinking behavior. It is a simple and not terribly massive theoretical leap from these data to the conclusion that the acquisition of drinking behavior, and the development of later problems of abuse, must in part be understood as the unfolding of a biochemical and behavioral sequence concerning the interest in, acquisition and consumption of beverage alcohol, and an understanding of the sequelae related to this process. Thus our project is examining genetic history for alcoholism, profundity of parent drinking history, early exposure to and development of a cognitive structure for drug use, family drinking patterns, etc. as predictors of later alcohol use and problems.

The second set of influencing structures focus on non-alcohol related processes that may ultimately be enhanced or suppressed by drinking behavior, but that also continue to operate independent of alcohol consumption; these are termed non-drinking specific influences. For example, if heightened aggressiveness is posited as one such nondrinking influencing structure, the model being utilized would require assessment of possible genetic differences in aggressiveness, parental modelling as a stimulator of aggression, social learning from parents and peers as additional factors leading to the development of increased aggressive activity, etc. If it is established that alcohol consumption enhances aggressive activity, or leads to heightened aggressive fantasy, then a greater likelihood of

earlier and/or heavier drinking would be one potential outcome of the matrix of these nondrinking specific elements. Of course, other outcomes, like greater aggressive activity in contexts where alcohol is not being consumed, would also be more likely.

In the present report we deal solely with portions of the data set focusing on nondrinking specific influencing structures. The formal hypotheses we are investigating have to do with the contribution of parental aggressiveness, at the individual and the interactional level to the enhancement of aggressive behavior in these young at-risk children. From the perspective of modelling, as well as by way of parent-child interaction patterns over the course of childhood, we anticipate that greater aggressiveness and greater parent-parent conflict in high risk families will lead to heightened aggressiveness among the high risk boys. We expect these effects to potentiate over time.

Introduction to the Study

Although high risk research on alcoholic families is by now a growing, if not a growth industry (cf. Goodwin, 1984), when our project was first assembled in the late 1970's few studies were in place; At that time we discovered that, with the one exception of Kellam's pioneering work (Kellam, et al, 1981) and some work being carried out in Sweden (Nylander, 1960, Rydelius, 1981) virtually all of them began in middle childhood or early adolescence (cf. Zucker & Noll, 1982). In conceiving our own study we started out with an interest in tracking children's development as soon as the developmental instabilities of infancy and toddlerhood had subsided, provided that we were able to reassure ourselves, via data, that an early search for risk

factors would, at the least, show cross-sectional differences that made sense within the framework of a hypothetico-deductive model for an eventual alcoholic outcome. Provided such differences could be demonstrated we concluded that it then would be worthwhile to mount a full scale longitudinal investigation.

Two years ago enough data had been assembled and the results were sufficiently confirmatory that we concluded the risk of continuing such a high risk study was justified. At that time the full scale longitudinal study was begun. Plans call for the intensive study of 50 high risk and 50 comparison families with preschool age male children as the primary target children. We chose to mount this study of a comparatively small group of families that we would get to know in a much broader way than we could hope to accomplish if our overall N were larger. Larger scale cross-sectional and mini-longitudinal studies are planned along the way to sharpen up and clarify findings that come out of the longitudinal project.

METHOD

Subject Selection: The high risk group is composed of young [2.5 to 6.0 years of age] male children (selected over females becuase the risk of alcoholism is about three times larger in boys) with alcoholic fathers in initially intact families. Family and genetic studies indicate that the expectation for alcoholism in this group of youngsters, when adult, is at least 25 percent and possibly as high as 40 percent (that is, between six and ten times as likely as the general male population) (Cotton, 1979; Shuckit, Goodwin and Winokur, 1972; Goodwin, 1979).

Alcoholic families with children this young are not that easy to come by; most alcoholics who show up in treatment agencies are themselves older, and have families that are in later stages of the life course than is

appropriate for recruitment into the study. We have solved this developmental problem by using a drunk driver population, who are apprehended with a sufficiently high blood alcohol level (in this case 0.15% --i.e., 150 mg/100 ml) so that there is presumptive evidence of tolerance. An agreement with the local district courts allows for the systematic recruitment of all fathers out of this group who have appropriate aged male children. Court personnel are both especially cooperative and also especially discreet. Potential candidates are simply asked to give their permission to have their names released for contact by the Michigan State University Family Study. Project personnel then make a home visit to screen for suitability for the study and to recruit the family. Later screening questionnaires and interviews verify that the individual in fact meets formal research diagnostic criteria (Feigner et al, 1972) for alcoholism. To date, 93 percent of persons screened this way have met these criteria and have been retained in the study.

The control group selected for the research is a community comparison sample, selected from within the same census tract as the alcoholic families. These families are socially comparable but nonalcoholic, and are contacted by using door-to-door survey techniques to locate families with children of like age ($\pm$ 0.5 years), sex, and sibling composition (insofar as possible) as those in the high risk group. This set of controls is yoked on a case-by-case basis to the alcoholic families. Data collectors are blind to family status.

Table 1 shows the demographic characteristics of the two groups and attests to the success of the matching procedures. Mean age of the target children in the study is 4.2 years; the parents are about 30 years of age

and have approximately three-child families at the time of first contact. The families social prestige scores indicate they are preponderantly blue collar.

Insert Table 1 about here

Table 2 shows the drinking characteristics of parents in the two sets of families. The research diagnoses obtained on the fathers indicate that our initial screening techniques were appropriate and that there is no diagnostic overlap between the high and low risk groups.

Insert Table 2 about here

Data Collection Procedures and Instruments: The majority of the data collection is done in respondent homes and is spread over a six session contact schedule. Project staff review questionnaire materials for completeness immediately after respondents are done. In addition, questions about the meaning of item content are encouraged when respondents indicate they are having difficulty with vocabulary because of limited reading skill level. In addition, the family comes into the university for a series of structured parent-child interactional tasks, and then again for a complete medical screening. Families are compensated moderately for this extensive battery of developmental measures on the children, questionnaire, interview and self-report data by both parents, and rating data on all study respondents done by each other and also by project staff. Wherever possible multiple measures involving different methods of data generation are used to assess the major predictive variables.

Data presented here bear upon individual and interpersonal measures of aggressive behavior and upon the family climate within which these activities take place. The individual measure is the Antisocial Behavior Checklist, a 46 item inventory of behaviors involving nine different homogeneous content subscales, including parental defiance, adolescent delinquent behavior, job related antisocial behavior, etc. (Zucker & Noll, 1980). Administration instructions attempt to minimize the negative connotation of the items by emphasizing the psychopathic delight of adventure, excitement and impulsivity and asking the respondent to describe the frequency of their involvement in each of the activities. Psychometric properties of the instrument are quite adequate (test-retest reliability is 0.81 over four weeks; coefficient alpha is 0.84).

Interpersonal involvements of the parents were evaluated using the INTREX questionnaires, that provide an assessment of the interactional process for the couple, within the context of Benjamin's model for Structural Analysis of Social Behavior (SASB) (Benjamin, 1974; 1979; 1984). SASB provides a formal theory of interpersonal transactions along with a set of questionnaires and a measurement technology to assess and analyze interpersonal functions. Central to the model is the proposition that the characterization of interpersonal transactions must include not only a map of the content domain (represented in most earlier models as dominance vs. submission, and love vs. hate --e.g., Leary, 1957), but must also include the concept of focus. Three elements of focus are identified; focus on other and focus on self are both seen as aspects of the interpersonal transactional process. Self awareness -- what Benjamin calls

INTROJECT focus, is construed as seperate from these other two events. It is also seen as derivative from interpersonal behavior insofar as focus on Introject is viewed as focus on other and action related to other, turned inward upon the self. This is a different level of behavior than self perception in the context of an interpersonal transaction.

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Insert Figures 1 and 2 about here
- -

Articulation of the concept of focus leads to an awareness that the previously labelled content domain has been inaccurately characterized, especially on the dimension that has been labelled in power or dominance terminology in earlier schemas. According to SASB this dimension in fact represents a fusion of a dimension of seperateness vs. inter-relatedness. Figure 1 shows how the labelling of the dimension (as well as of the horizontal axis) is more aptly described by different content labels for each of the three foci. Figure 2 illustrates how the behavioral content in the four quadrants also varies with focus.

Much that is useful is derivable from these few modifications in the description of interpersonal space. To give but two more: where previous models (e.g., Leary, 1957; Carson, 1969) suggested that transactions were most stable when the two individuals occupied mirror positions in interpersonal space, the SASB model specifies that relational stability is most likely when two persons occupy the same place on complementary foci. Benjamin calls this the principle of complementarity. And the principle of antithesis specifies that behavior opposite to the complement will draw the actor into a changed relationship with the other.

Fuller descruptions of this complex model's utility are described in

other sources (Benjamin, 1984a; 1984b). Data relevant to parent-parent transactions in the present research are generated by two SASB questionnaires. These measures require each spouse to rate the other person in relationship to self (the he/she form) and self in relationship to other (the I form) on 72 items that cover the interpersonal space shown in Figure 2. In addition each individual also completes a form describing themselves focusing on their own behavior, thoughts and feelings (Introject focus). Measures generated include affiliation and autonomy (interdependence) vectors, as well as a considerable number of more specialized descriptive indices.

The measure of family climate was provided by the Family Environment Scale (FES) (Moos & Moos, 1981), a measure of family functioning that is completed by both parents. The FES assesses the husband's and wife's perception of three aspects of family climate: quality of interpersonal relationships in the family (three subscales), areas of personal activity and involvement emphasized by family members (five subscales), and the degree of structure in the family (two subscales). These subscales have adequate reliability and internal consistency and the instrument has been used extensively in research carried out by Stanford's Social Ecology Laboratory on alcoholic as well as other types of families (Moos & Billings, 1982).

RESULTS

Antisocial Behavior

Total scores on the Antisocial Behavior Inventory were compared for mothers and fathers in alcoholic and community control families, using

a matched pairs analysis of variance. (See Table 3). This analysis showed a significant risk effect in the anticipated direction, with alcoholic parents reporting more history of antisocial activity than do the control parents. In addition, the expected sex difference also was significant ($F=7.66$, $p < .05$). Since this overall analysis was significant, subsidiary analyses of the content subscales also were done. They establish that the major sources of contribution to this effect are from prior involvement in delinquent activity (e.g., joy riding, gang fights, shoplifting); leaving the field (e.g., skipping school, running away, going AWOL); serious physical aggression (e.g., hitting teacher or principal, beating up on other people, killing an animal, involvement in a robbery using physical force or a weapon); job related antisocial behavior (e.g., lying to boss; being fired for poor job performance); school related antisocial behavior (e.g., cursing or lying to teacher, school suspension or expulsion), and from trouble with the law (e.g., being questioned by police, being arrested, resisting arrest). Scores show that the rate of antisocial activity is approximately one and a half to two times greater in the alcoholic families. Table 3 also shows that the parent effect is contributed to most heavily by differences between mothers and fathers in extent of trouble with the law.

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Insert Table 3 about here
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Family Climate Differences

Table 4 gives the Family Environment Scale results, also analyzed by matched pair ANOVA. Alcoholic families are reported by both parents to have a lower moral-religious emphasis in their day-to-day activities and involvements than is the case for the community controls (main effect F risk = 8.92,

$p < .05$). Discussion of ethical and religious issues and values is less common; this value emphasis is also presumably less salient in the alcoholic homes. The other significant difference is a Risk by Parent Interaction on Independence; the alcoholic fathers score higher than their wives ($F = 9.92$; df = 1, 18; $p < .01$) as well as both spouses in the nonalcoholic families. These fathers perceive the family setting as more highly encouraging of assertiveness and self sufficiency; they experience family values as encouraging of making one's own decisions and thinking things out on one's own to a greater degree than is true of the other parents.

Interpersonal Behavior

The INTREX questionnaires require each respondent to rate themselves in relationship to spouse in two modes -- as initiator of action and as receiver of action. In our analyses we paired ratings so that both husband and wife reported data related to the same event. Table 5A gives the results for focus on self and focus on other as it concerns the affiliation vector of the SASB model. Table 5B shows the parallel analyses for the autonomy-interdependence vector. The clearest effect in table 5 A shows that both husbands and wives in the alcoholic families describe their transactions in more hostile terms than do the comparison families. This effect is most clear cut when husband and wife focus on themselves as action initiators. When they focus on the other in the relationship, the difference in hostility is only present when the wife is the object of attention as the receiver of action. It is important to underscore that, in the context of SASB terminology these analyses indicate a basic agreement or complementarity to husband-wife interactions in these families. Both spouses describe their relationship in comparatively less rosy terms than is true in the homes

where no alcoholic father is present.

Table 5B shows that there are no systematic differences on the dimension of autonomy-interdependence. Thus the data indicate that the problematic aspects of these relationships center around issues of hostility more than they do around issues of autonomy, enmeshment or control.

DISCUSSION

These findings show that a group of four year old children who are disproportionately likely to become alcoholic some 20 to 30 years later are already exposed to parental models who have been more antisocial themselves as children, and who continue that pattern into adulthood in their work life, in direct aggressive activity, and in continued trouble with the law. These results are in substantial agreement with a number of the earlier longitudinal studies done on older samples of later-to-be alcoholics (McCord, 1984; McCord & McCord, 1960; Robins, 1966; Vaillant, 1983).

The data also show that there is a greater amount of dislike as part of the marital transactions in these families. This dislike is shared by both parties to the relationship.

The family climate results show that these alcoholic families are less likely to pursue moral-religious activities and interests that might in turn serve to moderate the dislike. In addition, these fathers see the family as allowing them their own independence to a disproportionately greater degree than is true of both spouses in the low risk families, and that is also greater than what their wives perceive. Conceivably this perceptual distance gives the alcoholic men a greater license to come

and go, and possibly also to be aggressive in their marriages.

The findings that have come out of this work so far are promising. Clearly they need to be extended on the larger data set we are currently assembling. But even with their promise there is much that is left to be filled in. We do not yet know which of the high-risk boys will eventually move into a pattern of alcohol abuse. The predictive model we are using specifies that the children themselves need to become more aggressive and interpersonally more conflicted. The child data set we have assembled does not indicate that the parents see this as happening yet. (Parent reports of child behavior show no risk group differences in child aggression.) But developmental data on these children (Noll & Zucker, 1983) indicates that there are already substantial developmental deficits that may in part be accounted for by disturbances in family functioning. This process is currently being tracked.

Last, we have no direct information yet about how eventual alcohol problems may begin to capture these children's lives. Studies from our group (Noll, Zucker, Weil & Greenberg, 1984) show that alcoholic concepts, and social norms about alcohol use are already known at this age. How this knowledge differentially might contribute to a later pattern of problem alcohol consumption, and how such a pattern might be enhanced by a behavioral style of greater aggression and greater interpersonal hostility remains still to be traced out.

Table 1

Demographic Characteristics of Alcoholic and Community Control Families

		Alcoholic Families (n=10)	Community Control Families (n=10)	F[1] Value
Age in Years				
-father's	$\bar{X}$	30.8	29.9	
	S.D.	(4.73)	(5.61)	.14
-mother's	$\bar{X}$	29.4	29.2	
	S.D.	(4.65)	(5.11)	.01
Religion				
% Protestant				
-fathers		40%	30%	NA
-mothers		40%	40%	NA
% Catholic				
-fathers		30%	50%	NA
-mothers		40%	40%	NA
% no religion				
-fathers		30%	20%	NA
-mothers		20%	20%	NA
Family Social Prestige[2]				
	$\bar{X}$	28.52	31.65	.18
	S.D.	(9.54)	(19.62)	
Number of Children Currently Living At Home				
	$\bar{X}$	2.7	3.0	.17
	S.D.	(1.42)	(1.67)	

Table 1 (cont'd.)

Age of Children Living At Home (Years)				
	$\bar{X}$	6.22	5.45	.50
	S.D.	(4.55)	(3.46)	
Age of Target Child (Years)				
	$\bar{X}$	4.14	4.22	.02
	S.D.	(1.05)	(1.23)	
Birth Position of Target Child				
	% 1st	30%	20%	NA
	% 2nd	50%	50%	NA
	% 3rd	20%	20%	NA
	% 4th	0%	10%	NA

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[1] Based on univariate F - tests; all p's nonsignificant.

[2] Duncan TSEI2 Socioeconomic Index (Stevens and Featherman, 1980). Scores are based upon main wage earner's occupation (typically the father's, except in one alcoholic family).

[3] Two alcoholic fathers had been chronically unemployed. Phone contact with the Michigan Employment Security Commission established that "laborer" jobs at the minimum wage are available in the Lansing area and that the job classification "laborer" is not currently on the surplus labor list. Both of these men had been working previously as semi-skilled laborers.

Table 2

Alcoholic Research Diagnosis and
Drinking Problem Scores of Parents in
Alcoholic and Community Control Families

		Alcoholic Families (n=10)	Community Control Families (n=10)	Chi-Square Value[1]
% with Diagnosis of Alcoholic[2] during Life of Target Child				
-fathers				
% definite		80%	0%	10.21***
% probable + definite		100%	0%	16.20***
-mothers				
% definite		20%	0%	<1.00
% probable + definite		20%	20%	<1.00
-both fathers and mothers				
% definite		10%	0%	<1.00
% probable + definite		10%	0%	<1.00
Total number of drinking problems (ever)				F Value[3]
-fathers	$\bar{X}$	10.10	1.60	26.73***
	S.D.	(4.61)	(1.74)	
-mothers	$\bar{X}$	1.60	1.20	<1.00
	S.D.	(2.76)	(1.25)	

Table 2 (cont'd.)

Mean SMAST[4] Scores			
-fathers	$\bar{X}$ 7.80 S.D.(3.31)	.80 (.75)	38.28***
-mothers	$\bar{X}$ 1.20 S.D.(2.14)	1.00 (1.10)	<1.00

1 χ^2 computed with Yates correction for continuity.

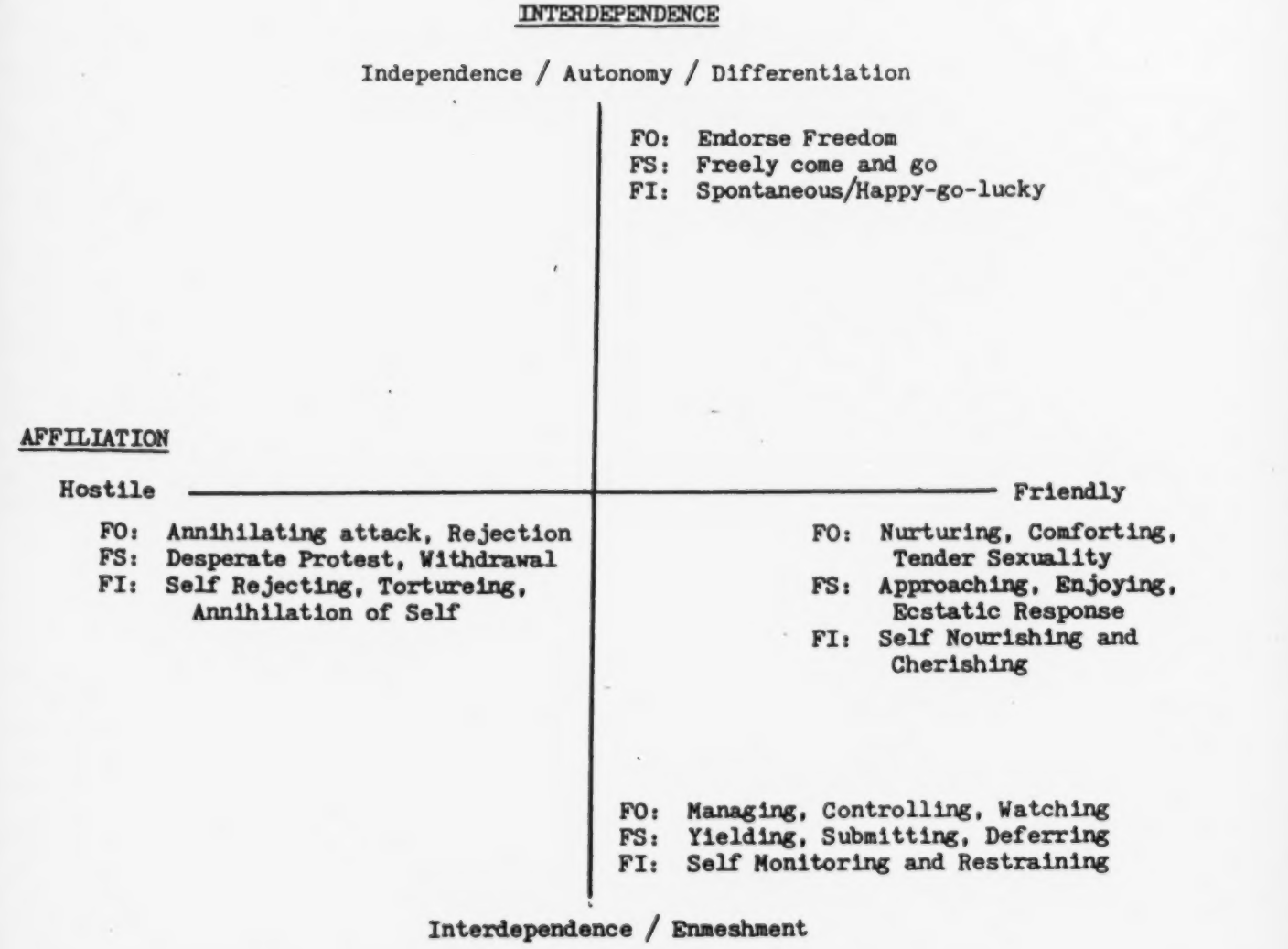
2 Using Feighner et al (1972) Research Diagnostic Criteria and best estimate data from SMAST and Drinking and Drug History.

3 Based on univariate F - tests.

4 SMAST - Short form-Michigan Alcohol Screening Test; data are best estimates from multiple information sources.

Figure 1

Basic Interpersonal Dimensions for
Structural Analysis of Social Behavior[1,2]

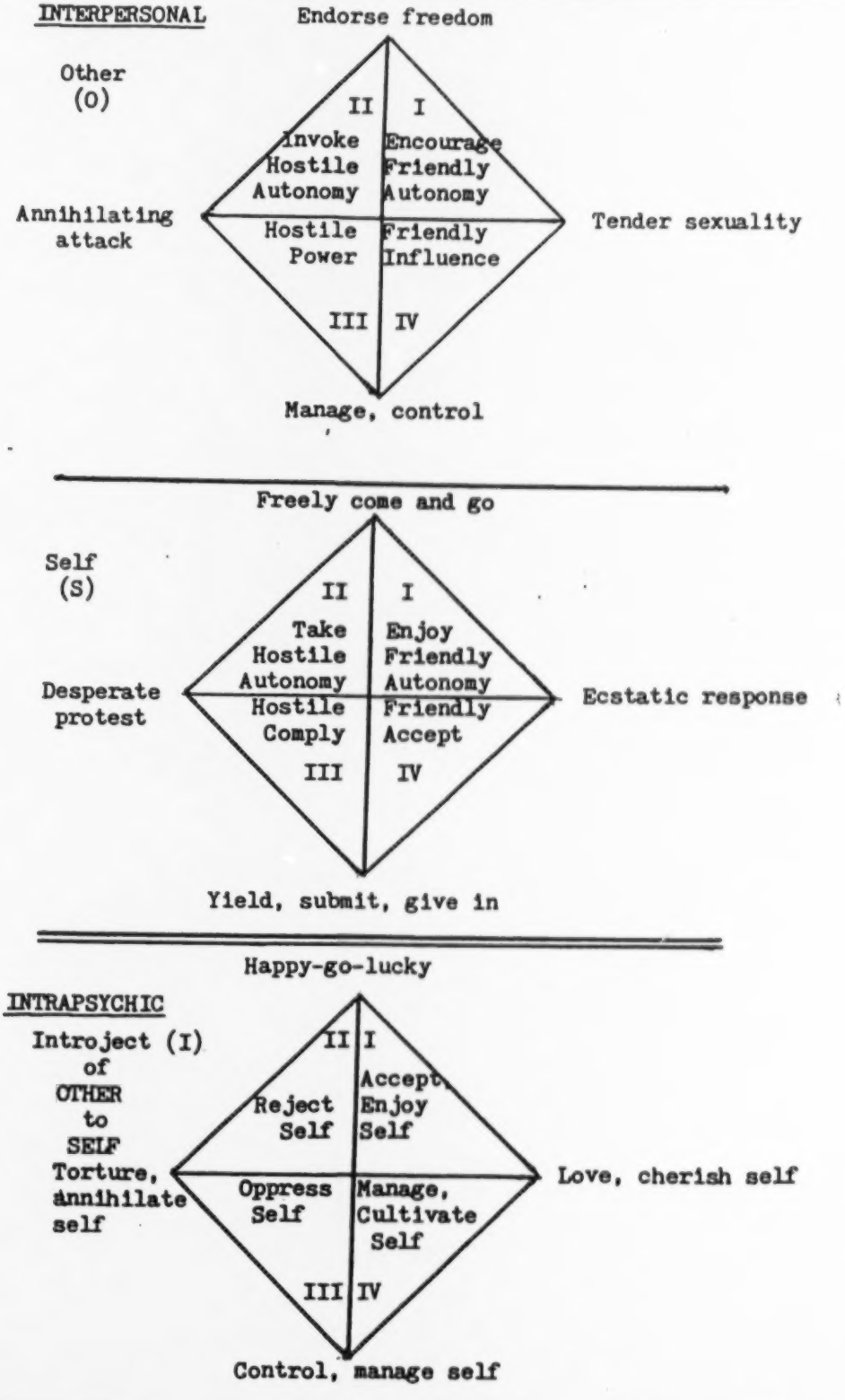


[1]The sources for this figure are Benjamin 1979, 1981, 1984.

[2]The specific dimensional labels vary with focus: FO=Focus on Other; FS=Focus on Self; FI=Intrapsychic Focus.

Figure 2

Quadrant Model of SASB
for the three types of Focus[1]



[1]Source: Benjamin (1979). Reproduced by permission.

Symptomatology Reported by Adults in
Alcoholic and Community Control Families --
Antisocial Behavior

			Alcoholic Families (n=9)	Community Control Families (n=9)	F-Value[1] F-Risk	F-Parent	F-PxR
Total Anti-social Behavior	Mothers	$\bar{X}$	8.67	4.89	11.08*	7.66+	0.20
		S.D.	(4.30)	(2.20)			
	Fathers	$\bar{X}$	16.22	10.67			
		S.D.	(5.74)	(5.38)			
Parental Defiance	Mothers	$\bar{X}$	2.33	1.89	0.57	0.41	0.01
		S.D.	(1.41)	(1.05)			
	Fathers	$\bar{X}$	2.89	2.44			
		S.D.	(1.27)	(1.13)			
Sexual Behavior	Mothers	$\bar{X}$	0.11	0.11	0.80	1.04	1.36
		S.D.	(0.33)	(0.33)			
	Fathers	$\bar{X}$	0.67	0.33			
		S.D.	(0.87)	(0.71)			
Delinquent Behavior	Mothers	$\bar{X}$	0.89	0.67	10.74*	3.23	0.77
		S.D.	(0.78)	(0.50)			
	Fathers	$\bar{X}$	1.89	1.11			
		S.D.	(0.93)	(1.05)			
Leaving the field	Mothers	$\bar{X}$	0.89	0.44	8.32*	0.32	0.49
		S.D.	(0.78)	(0.53)			
	Fathers	$\bar{X}$	1.33	0.56			
		S.D.	(1.22)	(0.73)			
Serious Physical Aggression	Mothers	$\bar{X}$	1.22	0.33	7.38*	3.51+	0.00
		S.D.	(0.83)	(0.50)			
	Fathers	$\bar{X}$	2.33	1.56			
		S.D.	(1.41)	(1.42)			

Table 3 (Continued)

			Alcoholic Families	Community Control Families	F-Value[1] F- Risk	F- Parent	F-PxR
Excitement And sensation Seeking	Mothers	$\bar{X}$	0.44	0.44	0.01	3.67+	0.09
		S.D.	(0.53)	(0.53)			
	Fathers	$\bar{X}$	1.33	1.33			
		S.D.	(0.87)	(0.71)			
Job related Anti-social Behavior	Mothers	$\bar{X}$	0.89	0.11	12.58**	1.19	0.28
		S.D.	(0.78)	(0.50)			
	Fathers	$\bar{X}$	1.22	0.67			
		S.D.	(0.97)	(.083)			
School related Anti-social Behavior	Mothers	$\bar{X}$	1.22	0.78	12.34**	4.94+	0.44
		S.D.	(0.83)	(0.83)			
	Fathers	$\bar{X}$	3.00	2.00			
		S.D.	(1.73)	(1.41)			
Trouble with the law	Mothers	$\bar{X}$	0.89	0.22	6.36*	21.62**	0.62
		S.D.	(0.78)	(0.44)			
	Fathers	$\bar{X}$	2.44	1.22			
		S.D	(1.59)	(1.09)			

Table 4

Family Environment as Perceived by Adults in Alcoholic and Community Control Families

Mean Scores

Moos Family Environment Scale Subscales[1]		Alcoholic Families (n=10)	Community Control Families (n=10)	F - Values Risk F	Parent F	Interaction F
Cohesion	Fathers	54.0	55.7	2.08	0.56	1.28
	Mothers	52.8	60.0			
Expressiveness	Fathers	55.6	55.3	0.06	0.93	0.11
	Mothers	56.9	59.1			
Conflict	Fathers	42.4	40.8	0.38	2.78	0.05
	Mothers	47.0	44.2			
Independence	Fathers	52.9	41.9	0.25	4.98+	6.27*
	Mothers	36.3	43.8			
Achievement-Orientation	Fathers	54.0	48.0	0.25	5.54*	2.91
	Mothers	44.0	46.0			
Intellectual-Cultural Orientation	Fathers	46.8	42.9	0.48	0.24	0.10
	Mothers	44.0	41.8			
Active-Recreational Orientation	Fathers	43.0	48.3	0.72	1.89	0.19
	Mothers	40.3	41.7			
Moral-Religious Emphasis	Fathers	53.0	61.9	8.92*	0.47	0.06
	Mothers	51.3	61.4			
Organization	Fathers	49.6	51.1	0.31	4.76+	0.16
	Mothers	51.7	55.0			
Control	Fathers	52.6	49.9	2.51	0.15	1.65
	Mothers	45.2	55.2			

+$p < .10$; *$p < .05$

[1]Standard Scores

Table 5 A

SASB Perceptions of Interpersonal Relationships Between Spouses in Alcoholic and Community Control Families -- AFFILIATIVE BEHAVIORS

		Alcoholic Families (n=10)	Community Control Families (n=10)	F-Value[1] F-risk	F-parent	F-PxR
FOCUS ON SELF IN THE INTERPERSONAL RELATIONSHIP						
(A) Wife as Initiator of Action						
(1) W: What I offer him	$\bar{X}$	97.80	137.40			
	SD	(65.29)	(57.15)	5.75*	0.05	0.32
(2) Hu: How I respond to that	$\bar{X}$	110.50	130.30			
	SD	(37.99)	(34.34)			
(B) Husband as Initiator of Action						
(1) Hu: What I offer her	$\bar{X}$	118.10	131.10			
	SD	(34.59)	(40.79)	21.71***	0.52	0.93
(2) W: How I respond to that	$\bar{X}$	88.00	141.90			
	SD	(70.65)	(51.00)			
FOCUS ON OTHER IN THE INTERPERSONAL RELATIONSHIP						
(A) Wife as Receiver of Action						
(1) W: What he offers me	$\bar{X}$	72.90	127.60			
	SD	(73.40)	(62.35)	5.50*	0.51	0.86
(2) Hu: How she responds to what I offer	$\bar{X}$	100.10	122.70			
	SD	(156.18)	(45.39)			
(B) Husband as Receiver of Action						
(1) Hu: What she offers me	$\bar{X}$	103.80	127.90			
	SD	(64.65)	(52.16)	2.64	0.03	0.13
(2) W: How he responds to what I offer	$\bar{X}$	95.60	131.90			
	SD	(55.29)	(51.05)			

[1] F-values are main effects for risk and parent status and interaction in an analysis of variance with repeated measures.

+p<.10; *p<.05; **p<.01; ***p<.001

Table 5 B

SASB Perceptions of Interpersonal Relationships
Between Spouses in Alcoholic and Community
Control Families -- AUTONOMY (+) vs. INTERDEPENDENCE (-)

		Alcoholic Families (n=10)	Community Control Families (n=10)	F-Value[1] F-risk	F-parent	F-PxR
FOCUS ON SELF IN THE INTERPERSONAL RELATIONSHIP						
(A) Wife as Initiator of Action						
(1) W: What I offer him	$\bar{X}$	24.80	7.60			
	SD	(31.99)	(23.64)	1.72	4.32+	0.10
(2) Hu: How I respond to that	$\bar{X}$	9.70	-1.40			
	SD	(30.18)	(33.61)			
(B) Husband as Initiator of Action						
(1) Hu: What I offer her	$\bar{X}$	19.30	28.70			
	SD	(21.09)	(19.23)	0.54	4.88+	2.64
(2) W: How I respond to that	$\bar{X}$	2.00	-20.00			
	SD	(55.21)	(22.29)			
FOCUS ON OTHER IN THE INTERPERSONAL RELATIONSHIP						
(A) Wife as Receiver of Action						
(1) W: What he offers me	$\bar{X}$	-3.20	17.60			
	SD	(33.26)	(38.64)	0.18	0.05	2.12
(2) Hu: How she responds to what I offer	$\bar{X}$	11.40	-1.00			
	SD	(32.27)	(19.80)			
(B) Husband as Receiver of Action						
(1) Hu: What she offers me	$\bar{X}$	19.00	-2.20			
	SD	(22.95)	(23.01)	2.92	0.84	0.00
(2) W: How he responds to what I offer	$\bar{X}$	25.40	5.50			
	SD	(38.12)	(33.28)			

+$p < .10$

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